

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1     1.     (~~Currently amended~~) ~~An overlay routing processor for transferring information~~  
2           ~~over a computer network, wherein the computer network has a native routing~~  
3           ~~protocol, the overlay routing processor comprising:~~  
4           A method comprising performing a machine-executed operation involving  
5           instructions, wherein the machine-executed operation is at least one of:  
6           A) sending said instructions over transmission media;  
7           B) receiving said instructions over transmission media;  
8           C) storing said instructions onto a machine-readable storage medium; and  
9           D) executing the instructions,  
10          wherein said instructions are instructions which, when executed by one or more  
11           processors, cause:  
12           ~~instructions for associating computer on the computer network with a~~  
13           ~~given overlay group;~~  
14           receiving a signal, originating from a sender, which indicates an intention  
15           of the sender to send packets to an overlay group that includes a set  
16           of computers;  
17           determining whether the sender has permission to send packets to the  
18           overlay group;  
19           if the sender has permission to send packets to the overlay group, then  
20           performing the steps of:  
21           ~~instructions for determining whether received information a~~  
22           received packet, from the sender, is associated with the  
23           given overlay group;  
24           ~~instructions for determining, for each computer associated with the~~  
25           overlay group, whether to send the received packet to a  
26           particular the computer, in the set of computers, via a  
27           multicast connection or a unicast connection based, at least

28                    ~~in part, on data indicating is to be transferred the~~  
29                    ~~information using multicasts or unicasting based on a~~  
30                    ~~request from the computer indicating a transport preference~~  
31                    ~~of the particular computer;~~  
32                    ~~instructions for upon determining that the received packet should~~  
33                    ~~be sent to the particular computer via the multicast~~  
34                    ~~connection, routing the received information packet to the~~  
35                    ~~computers particular computer having requested a multicast~~  
36                    ~~connection using the a native routing protocol to provide~~  
37                    ~~the information send the received packet by multicasting;~~  
38                    ~~and~~  
39                    ~~instructions for upon determining that the received packet should~~  
40                    ~~be sent to the particular computer via the unicast~~  
41                    ~~connection, routing the received information packet to the~~  
42                    ~~computers particular computer having requested a unicast~~  
43                    ~~connection using the native routing protocol to provide the~~  
44                    ~~information send the received packet by unicasting.~~

1    2-9.    (Cancelled).

1    10.    (Currently amended) The ~~overlay routing processor method~~ of claim 1, ~~further~~  
2           ~~comprising instructions for wherein said instructions, when executed by the one or~~  
3           ~~more processors, further cause:~~  
4           ~~handling administrative scoping preventing a multicast packet to be blocked at a~~  
5           ~~boundary point, wherein the multicast packet has a network address within~~  
6           ~~a specified range of network addresses.~~

1    11.    (Currently amended) The ~~overlay routing processor method~~ of claim 1, ~~further~~  
2           ~~comprising instructions for wherein said instructions, when executed by the one or~~  
3           ~~more processors, further cause:~~  
4           ~~in response to detecting that an amount of available bandwidth on a network is~~  
5           ~~below a threshold, servicing a plugin modules module thinning a packet~~

6                    stream, wherein said received packet is part of said packet stream.

1    12.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2            ~~comprising instructions for~~ wherein said instructions, when executed by the one or  
3            more processors, further cause:  
4            placing a limit on the number of transfers between computers for a given ~~portion~~  
5            of information packet.

1    13.    (Currently amended) The ~~overlay routing processor~~ method of claim 12, ~~wherein~~  
2            ~~information is transferred between the computers in packets, the overlay routing~~  
3            ~~processor further comprising instructions for~~ wherein said instructions, when  
4            executed by the one or more processors, further cause:  
5            placing a "time-to-live" value in a field ~~in a~~ of said received packet.

1    14.    (Currently amended) The ~~overlay routing processor~~ method of claim 1, ~~further~~  
2            ~~comprising instructions for~~ wherein said instructions, when executed by the one or  
3            more processors, further cause:  
4            preventing the transfer ~~of information~~ of packets between predetermined  
5            computers.

1    15.    (Currently amended) The ~~overlay routing processor~~ method of claim 14, ~~wherein~~  
2            said instructions, when executed by the one or more processors, further cause:  
3            storing one or more addresses that each identify a computer, and  
4            wherein the step of preventing the transfer of packets includes using the one or  
5            more addresses to prevent the transfer of packets to any computer  
6            identified by the one or more addresses.  
7            ~~wherein one or more computers are identified by an address, the overlay routing~~  
8            ~~processor further comprising using the address to prevent the transfer of~~  
9            ~~information between predetermined computers~~

1    16-23 (Withdrawn).

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